

MAO et al.
Ser. No. 09/810,825
Page 8 of 15

Amendments to the specification:

Please amend the paragraph beginning on page 8, line 12 as follows:

A braking pulse can be used to slow the motion of the movable member after it has passed the local energy maximum, but must be appropriately timed to provide braking without compromising switch operation. The braking pulse is usually a second pulse applied to the opposing set of comb fingers on a conventional electrostatic comb drive. Variations between individual MEMS devices may require that the actuating and braking pulses be determined on a chip-by-chip basis, which is undesirable for volume manufacturing.

Please amend the paragraph beginning on page 8, line 28 as follows:

The comb fingers are shaped to achieve acceleration and deceleration during a single "drive" pulse. Therefore, a single set of fingers can provide both a push and a pull action, the designations of which are arbitrary. When the electronic pulse states starts, the finger sets are drawn towards each other. The fingers have a wide portion and a narrow portion. The electrostatic energy is at a minimum when the wide portions of the movable fingers are aligned with the wide portions of the fixed fingers and applying an electric potential between the fingers causes the movable element to accelerate toward this position. However, the momentum and spring forces carry the movable element past the point where the wide portions of the fingers are aligned. If the electric potential between the fingers is still present, it will decelerate the movable portion because the electrostatic forces will be opposite to the direction of motion, i.e. in the direction to pull the wide portions of the fingers back together. Thus, a single complementary set of fingers can provide both a "pull" and "push" function during a single drive pulse.